

MATERIAL SAFETY DATA SHEET



SOLARIS

DATE PREPARED: 08/31/1995

MSDS No: 4218

ORTHO® ORTHENE® Fire Ant Killer

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: ORTHO® ORTHENE® Fire Ant Killer**PRODUCT DESCRIPTION:** Insecticide

MANUFACTURER

The SOLARIS Group

of Monsanto Company

P.O. Box 5008

San Ramon, CA 94583-0808

EPA REG. NO.: 239-2406A **PN:** 5153-G

24 HR. EMERGENCY TELEPHONE NUMBERS

Emergency Phone 800-454-2333

2. COMPOSITION/INFORMATION ON INGREDIENTS

<u>Chemical Name</u>	<u>Wt. %</u>	<u>CAS Registry #</u>
Acephate, O,S-Dimethylacetylphosphoramidothioate	75	30560-19-1
INERT INGREDIENTS	~ 25 .0	

"Inert Ingredients" is a term defined by the U.S. Environmental Protection Agency under the Federal Insecticide, Fungicide, and Rodenticide Act (40 CFR 158.153). It refers to any substance, other than an active ingredient, which is intentionally added to a pesticide product. Some inert ingredients may be hazardous chemicals, as defined by the Federal OSHA Hazard Communication Standard (29 CFR 1910.1200). The hazards associated with these inert ingredients have been included in this document.

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

PHYSICAL APPEARANCE: White powder with a strong cabbage-like or mercaptan type odor.

IMMEDIATE CONCERNS: - HARMFUL IF SWALLOWED
- CAUSES EYE IRRITATION
- AVOID CONTACT WITH EYES, SKIN OR CLOTHING
- AVOID BREATHING DUST OR SPRAY MIST
- KEEP OUT OF REACH OF CHILDREN

POTENTIAL HEALTH EFFECTS

EYES: This substance is slightly irritating to the eyes. Eye contact may include discomfort, tearing, swelling, redness, and blurred vision. See section 11, Toxicological Information.

SKIN: This substance is not expected to cause prolonged or significant skin irritation. If absorbed through the skin, this substance is considered practically non-toxic to internal organs.

INGESTION: This substance is slightly toxic to internal organs if swallowed. See Toxicology Information, section 11.

INHALATION: This substance may be irritating if inhaled. Respiratory tract irritation may include, but may not be limited to, one or more of the following: nasal discharge, sore throat, coughing, bronchitis and difficulty in breathing. If inhaled, this substance is considered practically non-toxic to internal organs.

TARGET ORGANS: Acephate is an inhibitor of the cholinesterase enzyme, found in nervous tissue, red blood cells, and plasma.

COMMENTS HEALTH: Depending upon the extent and degree of overexposure to the product, signs and symptoms of cholinesterase inhibition can result following either ingestion, skin contact or inhalation routes of exposure. Signs and symptoms of cholinesterase inhibition can result from either acute (one time), subchronic (repeated short-term) and chronic (daily life-time) overexposure to the product.

Signs and symptoms of cholinesterase inhibition usually occur within 12 hours following overexposure. These effects may include, but may not be limited to, headache, dizziness, weakness, nausea, vomiting, diarrhea, constriction of the pupil of the eye, blurred or dark vision, excessive salivation or nasal discharge, profuse sweating and abdominal cramps. Incontinence, unconsciousness, convulsions and breathing difficulties are indicative of severe poisoning. In untreated severe poisoning, death is due to respiratory failure or cardiac arrest.

4. FIRST AID MEASURES

EYES: Flush eyes immediately with fresh water for at least 15 minutes while holding the eyelids open. Remove contact lenses if worn. No

additional first aid should be necessary. However, if irritation persists, see a doctor.

SKIN: No first aid procedures are required. As a precaution, wash skin thoroughly with soap and water. Remove and wash contaminated clothing.

INGESTION: If swallowed, give a large quantity of water to drink, make person vomit and call a doctor. Never give anything by mouth to an unconscious person.

INHALATION: If respiratory discomfort or irritation occurs, move the person to fresh air. See a doctor if discomfort or irritation continues.

NOTES TO PHYSICIAN: This material contains a cholinesterase inhibitor. Measurement of blood cholinesterase activity may be useful in monitoring exposure. If signs of cholinesterase inhibition appear, atropine sulfate is antidotal. 2-PAM (PROTOPAM) is also antidotal and may be used in conjunction with atropine but should not be used alone.

ADDITIONAL INFORMATION: In case of medical emergencies involving this product, call day or night, (800) 454-2333.

5. FIRE FIGHTING MEASURES

AUTOIGNITION TEMPERATURE: No Data Available

EXTINGUISHING MEDIA: CO₂, dry chemical, foam and water fog.

HAZARDOUS COMBUSTION PRODUCTS: Normal combustion forms carbon dioxide, water vapor and may produce oxides of sulfur, nitrogen and phosphorous. Incomplete combustion can produce carbon monoxide.

FIRE FIGHTING PROCEDURES: Products of combustion from fires involving this material may be toxic. Avoid breathing smoke and mists. Avoid personnel and equipment contact with fallout and runoff. Minimize the amount of water used for fire fighting. Do not enter any enclosed area without full protective equipment, including self-contained breathing equipment. Keep containers cool with a water spray. Contain and isolate runoff and debris for proper disposal. Decontaminate personal protective equipment and fire fighting equipment before reuse. Read the entire document.

FLASHPOINT: Decomposes above 300F.

6. ACCIDENTAL RELEASE MEASURES

SMALL SPILL: Sweep up material and place in disposable container. Dispose of in accordance with instructions in Section 13. "DISPOSAL".

LARGE SPILL: Clean up spills immediately, observing precautions in Exposure Controls/ Personal Protection section. Vacuum with machines equipped with high efficiency filters or sweep up material and place in a disposable container. Scrub contaminated area with detergent and water using a stiff broom. Pick up liquid with Oil Dry, cat litter, clay, rags or other absorbent and place in a disposable container. Dispose of in accordance with instructions in Section 13. "DISPOSAL".

GENERAL PROCEDURES: Observe all protection and safety precautions when cleaning up spills -- see Section 8. "EXPOSURE CONTROLS/PERSONAL PROTECTION". For help with any spill, leak, fire or exposure involving this material, call day or night (800) 454-2333.

7. HANDLING AND STORAGE

GENERAL PROCEDURES: Keep pesticide in original container. Avoid contamination of feed and foodstuffs. Store in a secure cool, dry place.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS: No special ventilation is usually necessary. However, if operating conditions create high airborne concentrations of this material, special ventilation may be needed.

PERSONAL PROTECTION

EYES AND FACE: For application of product in accordance with label instructions, no special eye protection is needed.

Handling of the product is not likely to present an eye exposure concern during normal handling. In the event of an accidental discharge of the material during manufacture or handling which could cause eye contact, workers should wear goggles or a face shield.

SKIN: Wear protective clothing when handling or applying this product including long pants, long sleeved shirt, socks, shoes, and chemical resistant gloves. Wash nondisposable gloves thoroughly with soap and water before removing. Remove contaminated clothing and launder separately before reuse. Promptly and thoroughly wash hands and exposed skin with soap and water after using this product.

RESPIRATORY: No special respiratory protection is normally required. However, if operating conditions create airborne concentrations which exceed the recommended exposure standards, the use of an

approved respirator is required.

OSHA HAZARDOUS COMPONENTS (29 CFR 1910.1200):

Chemical Name	EXPOSURE LIMITS		
	OSHA PEL	ACGIH TLV	ACGIH STEL
O,S-Dimethylacetylphosphoramidothioate	None	None	None
Silica, amorphous	None	3 mg/m ³ Respirable	None
Sodium dioctyl sulfosuccinate	None	None	None

9. PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE: Powder

APPEARANCE: White powder with a strong cabbage-like or mercaptan-type odor

pH: Not Applicable

PERCENT VOLATILE: No Data Available

VAPOR PRESSURE: No Data Available

VAPOR DENSITY: No data Available

MELTING POINT: No Data Available

SOLUBILITY IN WATER: Soluble

EVAPORATION RATE: Not Applicable

DENSITY: 26-30 lbs./cu. ft.

10. STABILITY AND REACTIVITY

STABLE: YES

HAZARDOUS POLYMERIZATION: NO

CONDITIONS TO AVOID: Avoid contact with alkaline materials.

HAZARDOUS DECOMPOSITION: Contact with alkaline materials including hypochlorine oxidants, may produce noxious gases.

INCOMPATIBLE MATERIALS: Reacts with bases or strong oxidizing agents, such as chlorates, nitrates, peroxides, etc.

11. TOXICOLOGICAL INFORMATION

ACUTE

EYES: Corneal involvement and irritation clearing in 7 days or less.

DERMAL LD₅₀: Mild to slight irritation at 72 hours. The dermal LD50 in rabbits is greater than 10 g/kg.

ORAL LD₅₀: The oral LD50 in rats is 1494 mg/kg.

INHALATION LC₅₀: The 1-hour inhalation LC50 in rats is greater than 11 mg/l.

GENERAL COMMENTS: Acephate increased the incidence of liver tumors in high dose group female mice. Acephate was not carcinogenic in male mice, or rats, when tested in two-year feeding studies.

12. ECOLOGICAL INFORMATION

ENVIRONMENTAL DATA: No data available.

ECOTOXICOLOGICAL INFORMATION: This pesticide is toxic to birds. Do not apply directly to water. Do not contaminate water by cleaning of equipment or disposal of wastes. This product is highly toxic to bees exposed to direct treatment or residues on blooming crops or weeds. Do not allow livestock to graze on treated areas. Do not feed treated grass to livestock.

13. DISPOSAL CONSIDERATIONS

FOR LARGE SPILLS: Material collected that cannot be reprocessed should be disposed of in a landfill approved for pesticide disposal or in accordance with applicable Federal, State or local procedures.

PRODUCT DISPOSAL: The Solaris Group is committed to responsible environmental practices and recommends that all of the product be used up, carefully following all label directions and precautions.

If necessary to dispose of partially filled product container, then securely wrap it in several layers of newspaper and discard in trash.

EMPTY CONTAINER: Do not reuse empty container. Discard container in trash.

14. TRANSPORT INFORMATION

DOT (DEPARTMENT OF TRANSPORTATION)

PROPER SHIPPING NAME: Not Regulated

PRIMARY HAZARD CLASS/DIVISION: None

UN/NA NUMBER: NONE

PACKING GROUP: NO

U.S. SURFACE FREIGHT CLASS: Insecticides, Fungicides,
Insect or animal repellents or vermin exterminators, NOI, Other than
poison

AIR (ICAO/IATA)

PROPER SHIPPING NAME: Not Regulated

SPECIAL SHIPPING NOTES: The description shown may not
apply to all shipping situations. Consult 49CFR, or appropriate Dangerous
Goods Regulations, for additional description requirements (e.g., technical
name) and mode-specific or quantity-specific shipping requirements.

15. REGULATORY INFORMATION

UNITED STATES

SARA TITLE III (SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT)

PRODUCT CLASSIFICATION UNDER SECTION 311 OF SARA				
ACUTE:	CHRONIC:	FIRE:	REACTIVITY:	PRESSURE
YES	NO	NO	NO	GENERATING: NO

CARCINOGEN: Acephate IRIS Carcinogen Assessment is: C

STATE REGULATIONS

PROPOSITION 65 STATEMENT: Not listed

16. OTHER INFORMATION

HMIS CODES

FIRE: 1 **HEALTH:** 2 **REACTIVITY:** 0 **PROTECTION:** -

NFPA CODES

FIRE: 1 **HEALTH:** 2 **REACTIVITY:** 0 **SPECIAL:** -

APPROVAL DATE: 09/11/1995

REVISION SUMMARY New MSDS

COMMENTS: For additional information concerning this product, call the SOLARIS Groups Consumer Helpline at 800-225-2883.

MANUFACTURER DISCLAIMER: This Material Safety Data Sheet (MSDS) contains health, safety and environmental information for you and your employees. It does not replace the precautionary language, use directions, or the storage and disposal information found on the product label. Information contained in this MSDS will help you to prepare for emergency response and to meet community right-to-know, emergency response and reporting requirements under SARA Title III and many other laws. Emergency response agencies and health care providers will also find this additional information useful.

Use of this product is regulated by the U.S. Environmental Protection Agency (EPA) through the approved label copy. It is a violation of Federal law to use this product in a manner inconsistent with its labeling.

Although the information and recommendations set forth herein (hereinafter "Information") are presented in good faith and believed to be correct as of the date hereof, Monsanto Company and The Solaris Group make no representations as to the completeness or accuracy thereof. Information is supplied upon the condition that the persons receiving same will make their own determinations as to its suitability for their purposes prior to use. In no event will Monsanto Company or The Solaris Group be responsible for damages of any nature whatsoever resulting from the use of or reliance upon Information. NO REPRESENTATIONS OR WARRANTIES, EITHER EXPRESS OR IMPLIED, OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE OR OF ANY OTHER NATURE ARE MADE WITH RESPECT TO INFORMATION OR THE PRODUCT TO WHICH INFORMATION REFERS.